



## **U.S. Environmental Protection Agency Great Lakes National Program Office (GLNPO) Significant Activities Report**

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**August 2005**

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### **Ruddiman Creek Legacy Act Project Begins**

On August 8<sup>th</sup> the Ruddiman Creek Great Lakes Legacy Act project got underway. This is the third remediation project started under the Great Lakes Legacy Program. This project, located in Muskegon, Michigan, entails the removal of approximately 80,000 cubic yards of sediment contaminated with PCBs, metals, and PAHs. This \$10.6 million project is expected to take about nine months to complete. Under the Great Lakes Legacy Act, \$6.9 million or 65% of the project costs are paid with fed-



USEPA Administrator Steve Johnson speaks at Ruddiman Creek Cleanup Kickoff

eral funds. The other 35%, or \$3.7 million, is being funded by the non-federal sponsor--the state of Michigan, using Clean Michigan Initiative funds.

A kickoff ceremony took place on August 25<sup>th</sup> in Muskegon. USEPA Administrator Steve Johnson, Michigan Department of Environmental Quality Director Steve Chester, and Congressmen Vernon Ehlers and Pete Hoekstra participated and provided remarks at the event.

The Ruddiman Creek and Pond remediation project is located in Muskegon, County, Michigan and consists of approximately 2.3 miles of creek, a 21-acre pond, and approximately 39 acres of wetlands adjacent to the pond and creek. The pond discharges to Muskegon Lake and then to Lake Michigan. The Ruddiman Creek drainage is approximately 3,000 acres, and includes the cities of Muskegon, Norton Shores, Muskegon Heights, and Roosevelt Park. All four cities have storm sewers that discharge to Ruddiman Creek. The watershed includes properties

used for industrial, commercial, residential, and recreational purposes.

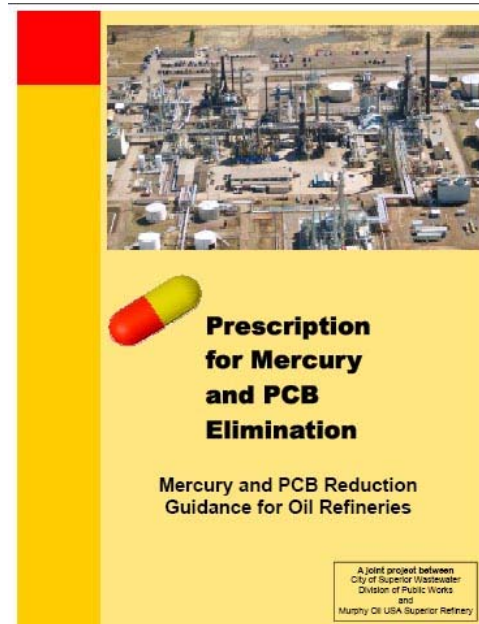
The main branch of Ruddiman Creek is currently posted as a No Swimming, Fishing or Recreation Area due in part to sediment contamination. The primary contaminants of concern include cadmium at 25 parts per millions (ppm), chromium at 2,900 ppm, polychlorinated biphenyls at 6 ppm and lead at 1,200 ppm. The contaminated area has been dammed off from the creek to allow efficient sediment removal using conventional excavation equipment. Upon completion of the sediment removal, the creek and pond will be reconstructed and water flow patterns restored.

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### **Pollution Prevention Lessons for Oil Refineries**

Funded in part by a GLNPO grant, the Murphy Oil USA Refinery in Superior, Wisconsin and the City of Superior Wastewater Division of Public Works (WDPW) entered into a voluntary partnership in 2001 to develop a pollution prevention guidebook for refineries and other industries interested in reducing use of mercury and polychlorinated biphenyls (PCBs). WDPW staff, with the assistance of Murphy Oil employees, conducted an inventory of mercury at Murphy Oil and reviewed its PCB removal activities.

Superior WDPW and Murphy Oil formed a partnership in part to inventory all mercury-containing equipment at Murphy Oil and to develop a mercury phase-out plan, a mercury-free purchasing policy, and mercury spill plan. Murphy Oil agreed to work toward mercury elimination by removing or replacing mercury-containing equipment



Cover of "Prescription for Mercury and PCB Elimination " for Oil Refineries  
(graphic courtesy of City of Superior WDPW)

with mercury-free alternatives. Since Murphy Oil had already removed PCBs from its electrical transformers before the grant was awarded, WDPW staff reviewed documentation to understand Murphy Oil's methods and timeline for PCB removal from electrical transformers.

This inventory was conducted so Murphy Oil's pollution prevention efforts could be used as a case study for a guidebook titled "Prescription for Mercury and PCB Elimination: Mercury and PCB Reduction Guidance for Oil Refineries." The guidebook provides information to oil refineries and other industries that need assistance in order to enter into voluntary pollution prevention agreements with governmental agencies, and conduct on-site inventories and reduction activities for mercury and PCBs. Copies of the guidebook were printed and sent to most of the oil refineries and chemical companies on the mailing list of the National Petrochemical and Refiners Association (90 refineries total).

The guidebook is available on the City of Superior's WDPW Web Site at:

<http://www.ci.superior.wi.us/publicwks/wastewater/MurphyProject.htm#menu>

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### New Great Lakes Watershed Restoration Grant Program

A new grant program: the Great Lakes Watershed Restoration Program is being established through cooperation among several federal agencies. The participating agencies are contributing thousands of dollars to fund projects that directly address priority areas identified by the Great Lakes Regional Collaboration's Habitat/Species Strategy Team. GLNPO is contributing \$400,000; the U.S. Fish and Wildlife Service is contributing \$200,000; the National Oceanic and Atmospheric Administration is contributing \$100,000. The National Fish and Wildlife Foundation is coordinating the program: posting the Request for Proposals (RFP) on their website at: <http://nfwf.org/programs/greatlakes> with links to contributing federal agencies, coordinating proposal reviewers, and administering the grants.

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### Summer Water Quality Survey

The 2005 Great Lakes Summer Water Quality/Ecology Survey began on July 31st. The *R/V Lake Guardian*, with a crew of chemists and biologists is visiting each of the Great Lakes, taking samples to assess their environmental health. Samples will be taken for water chemistry, including nutrients and general water quality parameters. The planktonic and benthic communities will also be assessed from samples taken throughout the lakes. This year, the survey



Scientist aboard the *R/V Lake Guardian* washes down plankton sample from sides of plankton

is scheduled cooperatively with the NOAA effort to investigate the dead zone in Lake Erie, a project which builds upon GLNPO's efforts in 2002 and 2003. The use of the ship by NOAA scientists will extend the survey into late September when Lake Superior will be visited.

GLNPO is responsible for monitoring the offshore water quality of the Great Lakes to evaluate water quality over time and identify any emerging water quality problems. Comprehensive water quality surveys are conducted in all five Great Lakes in both the spring, when the water is cold and well mixed, and in the summer, when the lakes are biologically active.

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### A Visit to Torch Lake

GLNPO's Vicki Thomas and Mark Elster and Brenda Jones of USEPA Region 5 Superfund made a site visit to the Torch Lake, Michigan Area of Concern (AOC) on August 23<sup>rd</sup> and met with the State of Michigan and the Torch Lake Public Advisory Council (the local citizens group working on the AOC). The AOC has been im-





Mason Sands area of the Torch Lake Superfund site and AOC shoreline restoration "before" (left) and "after". For a reference point, GLNPO's Mark Elster points to a partially submerged dredge and the chimney of an old mill that can also be seen in the "before" picture. Many of the ruins of the mining industry are being preserved as a reminder of the role of the copper mining has had in the development of this part of Michigan.

pacted by the remnants of copper mining activities. Stamp sand piles, which are the by-product of removing the copper from the ore, dot the AOC. Through State and Federal Superfund actions, much of the stamp sand piles in the AOC have been stabilized through the application of clean soil seeded with vegetation. This has led to the reclamation of many acres of the AOC. The Superfund activities should be completed by 2007 and it is hoped that the AOC can be formally delisted by that date.

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### Burning River Festival

USEPA Great Lakes National Program Office's Great Lakes Research Vessel *R/V Lake Guardian* was open for tours as part of Cleveland's Burning River Fest. On Saturday, August 13<sup>th</sup>, the ship docked at the end of 9<sup>th</sup> Street in North Coast Harbor. Tours were conducted every 30 minutes beginning at Noon and ending at 5:30 p.m. Tours showcased the ship's sampling gear, laboratories, living spaces, and bridge. USEPA tour guides from the Region 5 Cleveland Office and GLNPO's David

Rockwell and Beth Hinchey Malloy conducted the tours, educating visitors on the research and monitoring mission of the *Lake Guardian* while Captain Bob Christensen explained the ship's navigation systems.

The 180-foot *R/V Lake Guardian* is the USEPA's largest research and monitoring vessel. It is the only self-contained, non-polluting research ship on the Great Lakes. It conducts monitoring programs that sam-



Facilitating the *R/V Lake Guardian* Open House at the Burning River Festival were (left to right): Mark Conti, Lyn Luttner, Captain Bob Christensen, Dave Rockwell, George Coder, and Beth Hinchey Malloy

ple the water, aquatic life, sediments, and air in order to assess the health of the Great Lakes ecosystem by using state-of-the-art data collection techniques and instruments during the biannual spring and summer surveys. It is also used to support research activities conducted by Federal, State, and, local agencies, and universities.

The annual Burning River Fest is a non-partisan public awareness and education event created to highlight the Cuyahoga River, its neighboring waterways and other environmentally focused efforts.

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### Sharing Great Lakes Long-Range Transport Expertise

On August 4<sup>th</sup> GLNPO's Todd Nettesheim joined scientists from Queens College, Rutgers University, Vanderbilt University, NOAA, and other EPA Offices to share their expertise on the long-range transport of dioxins with the New York / New Jersey Harbor Project. The session was organized by the New York Academy of Sciences. The purpose of the meeting was to begin identifying the relative significance of local, regional, national, and global sources of atmospheric dioxin deposition to the New York / New Jersey Harbor. The New York Academy of Sciences organized the meeting as part of the larger Harbor Project, an industrial ecology / pollution prevention assessment of pollutants in the New York / New Jersey area.

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GLNPO scientists process a sediment core sample aboard the *R/V Mudpuppy*

### Buffalo River Press Event

GLNPO's Mary Beth G. Ross attended a press event on August 23<sup>rd</sup> at the Smith Street Habitat Restoration Site in Buffalo, New York. The event was coordinated by the New York State Department of Environmental Conservation (NYSDEC). Other participants in the event included representatives from the U.S. Army Corps of Engineers' Buffalo District, the Buffalo Niagara RIVERKEEPER (formerly the Friends of the Buffalo and Niagara Rivers), local universities, and the Erie County Federation of Sportsmen's Clubs. Abbey Snyder (NYSDEC) and Jill Spisiak Jedlicka (Buffalo-Niagara RIVERKEEPER) thanked those present for their support and stressed the need for continued improvement in the quality of the sediments, water, and fish and wildlife habitat. Mary Beth Ross described the sample collection and processing procedures while the *R/V Mudpuppy* and Corps' pontoon boat collected and processed a sediment core from the Smith Street section of the Buffalo River.

The NYSDEC, with field assistance from USEPA and the Corps, is collecting approximately 400 sediment core and ponar samples from over 150 sites along the Buf-

falo River. The samples will be analyzed for PCBs, PAHs, pesticides, metals, and toxicity. The results of the sampling will be used in the Corps' feasibility study, and once that is completed, the project will be in the position to access the Corps' Section 312 (a) and/or Great Lakes Legacy Act funds for sediment remediation.

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### Ryerson Creek Sediments Sampled

From August 9<sup>th</sup> to 11<sup>th</sup>, scientists from GLNPO, Grand Valley State University, and the Michigan Department of Environmental Quality (MDEQ) collected sediment samples from ten locations at the mouth Ryerson Creek, which is part of the Muskegon Lake Area of Concern. This assessment project was conducted under the Great Lakes Legacy Act, with MDEQ serving as the non-federal sponsor. The samples will be analyzed for PCBs, PAHs, and metals, as well as toxicity testing. The purpose of the sampling was to study the nature and extent of contamination in Ryerson Creek and help determine if this site might be a candidate for Legacy Act remediation funds in the future.

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### Fish-Friendly Culverts

Working under an Interagency Agreement with GLNPO, the Fish and Wildlife Service, Ashland, Wisconsin Fisheries Office has completed a new web site "No/Low Impact Culverts for Fish Passage" (<http://www.fws.gov/midwest/Fisheries/streamcrossings>) designed to provide best management practices for culvert design. Users can learn how to design fish-friendly



An example of a culvert that allows easy fish passage (photo courtesy of U.S. Fish and Wildlife Service)

culverts through a presentation that includes the segments:

- About the Program
- Cautions to Consider
- Evaluation of Your Work Site
- Choosing Options for Replacement Structures
- Final Site Preparation/Culvert Installation
- Erosion Control
- Quick Reference Guide
- References and Web Links.

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### Dioxin 2005 Conference

GLNPO's Melissa Hulting attended the 2005 Dioxin Conference held this year in Toronto, Canada on August 22<sup>nd</sup> to 26<sup>th</sup>. Dioxin 2005 is an international conference for research on halogenated environmental organic pollutants. Presentations included those on environmental levels of "legacy pollutants" such as PCBs and DDT, as well as emerging pollutants of concern including PBDEs, perfluorinated compounds, and synthetic musks. Erin Newman of USEPA Region 5's Air and Radiation Division was a co-author on a poster about the work of the Great Lakes Binational Toxics Strategy Dioxin and Furan workgroup to reduce the emissions of dioxins and furans in the Great

Lakes and nationwide.

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## Upcoming Events

### 2005

September 15 <sup>th</sup>	Great Lakes Binational Toxics Strategy Integration Workgroup, Chicago, Illinois
November 2 <sup>nd</sup> -3 <sup>rd</sup>	State of Lake Michigan Conference, Green Bay, Wisconsin
December 6 <sup>th</sup> -7 <sup>th</sup>	Great Lakes Binational Toxics Strategy Stakeholder Forum and Integration Workgroup, Chicago, Illinois
December 12 <sup>th</sup>	Great Lakes Regional Collaboration Summit II, Chicago, Illinois

We welcome your questions, comments or suggestions about this month's Significant Activities Report. To be added to or removed from the Email distribution of the Significant Activities Report, please contact Tony Kizlauskas, 312-353-8773, [kizlauskas.anthony@epa.gov](mailto:kizlauskas.anthony@epa.gov).